Space Weather Forecast

Issued on Wednesday, 04 May 2022 at 01:26 Local

This forecast provides a four day assessment of space weather events. The probabilities stated below are for reaching or exceeding the given levels. For more information about space weather impacts please see the Met Office Space Weather Scales https://www.metoffice.gov.uk/weather/learn-about/space-weather/uk-scales

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Space Weather Forecast Headline: No significant geomagnetic activity. Likely increasing chance of R1-R2 blackouts, with a slight chance of R3 blackouts from region transiting southeastern limb.

Analysis of Space Weather Activity over past 24 hours
Solar Activity: Solar activity was High, due to a Strong flare from a region which has just rotated onto the southeast limb. There are three numbered sunspot regions on the disc, the most complex of these a developing bipolar region close to the centre of the disc. No Earth-directed CMEs (coronal mass ejections) have been observed on visible imagery.

Solar Wind / Geomagnetic Activity: The solar wind has returned to ambient levels. The total strength of the magnetic field carried by the solar wind has been weak, with the important north-south component also varying weakly. Resultant geomagnetic activity was Quiet.

Energetic Particles / Solar Radiation: No solar radiation storms were observed during the last 24 hours.

Four-Day Space Weather Forecast Summary
Solar Activity: Solar activity is expected to be Low, with an increasing chance of Moderate and a slight chance of High activity, due to the rotation of an old region onto the southeast limb, which was significantly active on the previous rotation.

Solar Wind / Geomagnetic Activity: No Earth-directed CMEs are currently forecast. Solar wind conditions are expected to be ambient over the next four days, with no enhancements forecast. Geomagnetic activity is expected to be mainly Quiet, with isolated Unsettled intervals.

Energetic Particles / Solar Radiation: No solar radiation storms are expected through the forecast period.

Issued by Met Office Space Weather Advisor, Tel: +44 (0) 330 135 4254 Email: moswoc@metoffice.gov.uk

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Geomagnetic Storms:

Geo-Magnetic Storm Probability (Exceedance)	Level	Past 24 Hours (Yes/No)	Day 1 (00-24 UTC) (%)	Day 2 (00-24 UTC) (%)	Day 3 (00-24 UTC) (%)	Day 4 (00-24 UTC) (%)
Minor or Moderate	G1 to G2	No	1	1	1	1
Strong	G3	No	1	1	1	1
Severe	G4	No	1	1	1	1
Extreme	G5	No	1	1	1	1

Radio Blackouts - X Ray Flares:

X Ray Flares Probability	Level	Past 24 Hours (Yes/No)	Day 1 (00-24 UTC) (%)	Day 2 (00-24 UTC) (%)	Day 3 (00-24 UTC) (%)	Day 4 (00-24 UTC) (%)
Active	R1-R2 M Class	Yes	30	30	30	30
Very Active	R3 to R5 X	Yes	10	10	10	10

Solar Radiation Storms - (High Energy Protons):

Radiation Storms Probability (Exceedance)	Level (cm^{-2} sr^{-1} s^{-1})	Past 24 Hours (Yes/No)	Day 1 (00-24 UTC) (%)	Day 2 (00-24 UTC) (%)	Day 3 (00-24 UTC) (%)	Day 4 (00-24 UTC) (%)
Active	≥ S1	No	1	1	1	1
Very Active	≥ S3 *	No	1	1	1	1

* S3 ≥ 10 MeV ≥ 1000 pfu and / or ≥ 50 MeV ≥ 10 pfu. (pfu = $cm^{-2}sr^{-1}s^{-1}$)

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